THE GENESEE FARMER.

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THE GENESEE FARMER.

SATURDAY, NOV. 28, 1835.

The Silk Culture.

The culture and manufacture of silk in this country is assuming a deep interest. But it has attained in a very small degree the importance it is yet destined to acquire; and years must elapse, and the subject receive far greater attention, before the demand for silk goods in our own country alone, can be nearly supplied from domestic manufacture. But the fact that there is a gradual and constantly increasing attention to the subject, shows that it is advancing towards its place as an extensive and important branch of American industry.

The history of the silk culture in this country, shows that the bettor it is understood, the more it is appreciated; and is full of encouragement to those who are engaging in the business. The first attempt in America was made in Virginia so early as the year 1623; but it was not carried on to any extent until after the middle of the last century. About that time, and for several years subsequently, it received considerable attention in the Southern States, the quantity manufactured, however, continued small. Early attention was paid to its culture in Pennsylvania; in 1770, Susannah Wright, of Lancaster county, made a piece of mantua of *sixty yards* in length of her own cocoons; in the same year, a filature was established at Philadelphia, and in 1771, 2300 lbs. were brought there to reel. The business however declined during the Revolutionary war. In Connecticut the business was early commenced on a firm basis, and has since been constantly increasing. The white mulberry and the silk worm were first introduced into the town of Mansfield in Windham county, by Nathaniel Aspinwall in the year 1760, immediately after which an extensive nursery of the trees was planted by him in New Haven, and afterwards disseminated throughout the state. In 1789 two hundred pounds of raw silk were made in the single town of Mansfield alone. In the year 1810, the value of the sewing silk and the raw silk, made in the three counties of New London, Windham, and Tolland, was estimated by the United States Marshall at $23,503; but the value of the domestic fabrics made from the refuse silk, which may fairly be estimated at half that sum, was not taken into consideration. In 1825, the value of the silk and of the domestic fabrics manufactured in the county of Windham, had doubled. During all this time, the only machine for making the sewing silk, were the common domestic large and small wheels; with better machinery, sewing silk of a superior quality would have been made, and at less expense. Three fourths of the families in Mansfield were engaged in raising silk, and made annually from 5 to 10, 20, and 50 pounds in a family, and one or two, each 100 lbs. in a season. In 1832, four or five tons of raw silk were grown there, worth $35,000; when manufactured into sewing silk this would be worth about $60,000. Four or five of the adjacent towns each produced about as much as that town. About the same time, the quantity of silk raised in Windham and Tolland counties, was sufficient to give constant employment to 50 looms weaving five yards each per day, or in all about 75,000 yards per year. In our own state, the subject has not, until recently, received much attention; during the late war however, one individual, the late Samuel Chidsey, of Cayuga county, sold sewing silk of his own manufacture, to the amount of 600 dollars a year, raised from trees of the white mulberry introduced by himself at the first settlement of the country. A few years ago, at one establishment in Pennsylvania, (Economy,) one hundred silk handkerchiefs, and an equal number of vest patters, of superior quality to foreign articles, were made annually. In Massachusetts, Jonathan H. Cobb, of Dedham, commenced the culture of silk in 1826, and has since that time extended his operations so much as to be in the habit of bringing into the Boston market, American silk manufactured to the amount of one hundred dollars per week, the year round. His spinning machine, propelled by water power, is capable of preparing annually, 1000 lbs. of silk for the loom. In the same town there are a number of silk looms, as well as in several neighboring towns, which are worked by hand, and in most instances by persons in their own abodes.

We have deemed it proper to exhibit this view of what has been done already, in order that those who are deterred from entering the business on account of supposed difficulties, may perceive that these difficulties have been surmounted by others with ease. The subject has indeed been supposed to be involved in much mystery, and a great deal has been written upon the subject. Many persons reading the elaborate articles which have been published, describing so minutely every process, are led to suppose the business intricate and difficult. To the inexperienced it must indeed be *new*, because it is different from most other pursuits, and has none similar to it to serve as a guide; but when once understood, it becomes quite simple, and is as easy as raising pigs and poultry. It is only necessary, during the short period of the existence of the worms, to supply their wants and protect them from injury,—to shelter them from the storms, cold, and wind,—and to feed them with proper food when hungry,—and there can be little danger of success. Many indeed have been entirely successful who have never had the advantage of seeing a single silk establishment; and nearly all in this country have been mostly guided by their own experience. Yet in many respects, American articles thus produced have been found fully equal, and often superior, to foreign ones. In Economy, Pa. it has been several years since large quantities of silk have been manufactured into vestings, handkerchiefs, and other broad articles; which have been reeled, dyed, spun, woven and finished at that place; and in Dayton, Ohio, domestic silk handkerchiefs have been made of most excellent quality, the product of the *native* mulberry, where the process of winding, reeling, doubling, twisting, &c. were performed by machinery, principally of the invention of the proprietor of the establishment. Sewing silk of all colors, is a very common article of manufacture in all parts of the country.

The following calculation of the labor attending and connected with the culture of silk, in Connecticut, is by John Fitch, Esq. of Mansfield, in that state.

One acre of full grown trees, set one and a half rods apart, will produce forty pounds of silk.

The labor may be estimated as follows:

For the three first weeks after the worms are hatched, one woman who is acquainted with the business, or children who would be equal to such a person.

For the next twelve or fourteen days, five hands, or what would be equal to five, if performed by children. This period finishes the worms.

For picking off the balls, and reeling the silk, it will require about the same amount of labor, for the same length of time, as the last mentioned period, which may be performed by women and children. The aforesaid labor and board may be estimated at eighty dollars, spinning the silk at thirty-four dollars; forty pounds of silk, at the *lowest* case price, is now worth two hundred dollars—which makes the following result:

40 lbs. silk, at $5 per pound,.....		$200 00
Labor and board,.....	$80 00	
Spinning,.....	30 00	
		114 00
Nett profit per acre,.....		$86 00

The principal part of the labor may be performed by women and children. But where the business is carried on to a considerable extent, it is considered more profitable to employ some men for the last period of the worms.

It is now believed by many, that if instead of transplanting the trees in the orchard form, as in the above estimate, they are placed in rows about eight feet apart and two or three feet in the row, by proper care and culture, five times the amount may be raised from an acre. But even on the supposition in the above estimate, (which experiment has proved to be very moderate,) how can an acre of land be made to yield a greater profit? If the rockiest towns in Connecticut produce annually seventy or eighty thousand dollars; why may not the more fertile regions further west do as much? *Children* may make more from an acre of mulberry trees, than *men* can make from an acre of wheat or corn.

Perseverance and judgment are required for success in this, as well as in every branch of business; and those who engage in the work must be prepared for some disappointments at the commencement, for experience is always necessary

in every undertaking. But difficulties will soon be overcome by practice.

Competition cannot affect it, except for the better; for the greater the number of cocoons produced, the greater will be the inducement for the erection of silk filatures and manufactories of the best construction, which will not only cheapen the labor, but increase materially the value by improving the quality of the articles. Nor can there be any danger of the market becoming soon overstocked, while ten or twelve millions of dollars worth are annually consumed in the United States; besides which millions of dollars worth of raw silk are yearly imported into France and England to supply the manufactories.

On Thorn Hedges.

A correspondent near Philadelphia, who has a large portion of his farm enclosed by thorn hedges, writes in reference to a passage in the "Remarks of a Traveler," as follows:

"The insect so destructive to the cherry, the plum, and sometimes the thorn, was in my hedge some years ago; but it has now almost, if not entirely, disappeared. The Red Cedar is scarce with us, so I left one standing by the road side where I planted a hedge. I found however, that near the cedar it began to decline; and in order to prevent further mischief, I cut the tree down; but this did not cure the hedge, and on a closer examination I discovered that the aforesaid insect was the cause. It began at the cedar, and extended about fifteen feet on each side, destroying all the leaves and tender branches of the hedge. With the shears I then clipped all the infested parts: the insects perished, and that part is now as thrifty as any of my hedges.

"I have since been informed that other persons in this county, have been unsuccessful in cultivating the thorn near Red Cedars which harbor the insects. Accordingly they destroyed the trees, and have since had no difficulty in raising good hedges."

We have no doubt that Red Cedars harbor an insect that proves injurious to thorn hedges; but we are not quite satisfied that it is the same as that which depredates on the plum and the cherry. Our correspondent would oblige us by closely investigating this subject. We think it probable that several other kinds of insects also feed on the thorn; and that *some* species of Crataegus are more exempt from their depredations than others.

Extract of a letter, from our correspondent W. G., dated Otisco, Nov. 16:

"I perceive by the Farmer, and by the south-western papers, that there has an immense quantity of water fallen in the region of the Genesee and the Allegany rivers, producing great damage. In our part of the country on the contrary, less rain has fallen during the month of October, than in the same month for several years past, and the streams are rarely lower than they have been, and indeed now are. At the time the rains were falling so heavily to the west and south, we had clouds and mist with slight rains, not enough to produce the slightest inconvenience. October with us has in the main presented the most splendid traits of the Indian Summer, mild, smoky, and delightful. The fine weather has had a good effect on the corn, much of which was severely injured by the September frosts. Still corn will be high and scarce, and as a necessary consequence, pork will be dear, and in general of an inferior quality. A gentleman in this town has lately returned from Massachusetts. The season has been more unfavorable there than here. Grain of all kinds is excessively high—fodder very scarce—and the prices of cattle lower than ever before known. Dairy farmers are compelled to dispose of their cows, at from 5 to 7 dollars each, and other stock in proportion."

Errata.—Page 362, col. 1, line 23 from the bottom, for "*r*yctaginiflora" read *ny*ctaginiflora —line 18 from bottom, for "Sans*i*viera" read Sanseviera—line 17 do. for "last" read best—col. 2, line 16, for Eccremo carpus" read Eccremocarpus—line 24, for "grew" read grow—line 26, for "some" read "three." This entirely destroys the sense.—Page 365, col. 1, line 5, of article on the culture of Ruta Baga, for "800," read 300.

Pine Plains.

Large districts of our country bear this denomination. Their intrinsic value for agriculture is daily becoming better appreciated; and under improved management, with the aid of the clay marl which generally underlays them, they promise soon to be among our most profitable lands. The lowing judicious remarks, on the proper mode of cultivating these lands, on "frequent ploughing," and on "natural meadows," although written for Saratoga, have a general application, and cannot but be read with profit by all who cultivate sandy lands. They are extracted from a Geological Survey of Saratoga county, written by Dr. *Steele*, of Saratoga Springs.—*Cultivator.*

The method which should be pursued with this soil, in order to obtain the greatest possible profits, seems to be agreed, among the most experienced farmers, to be the following: First crop, winter wheat; second, Indian corn; third, barley, oats, spring wheat or rye, with which grass seed should be sown, (clover and timothy is preferred,) and the whole ploughed or dragged in, at the same time. Experience has likewise given currency to the belief that the *roller* is a very important implement in seeding sandy soils. It should be employed immediately after the seed is put in. This renders the surface compact and smooth, gives a depth and firmness to the roots of the young plants that they do not possess when the seed is strewed over the surface, as is the usual custom; and besides, it is supposed to protect it very materially against the effects of the winter.

On the following season, the clover is to be well plastered, and the crop mowed for hay: the next season it should be again well strewed with plaster, and it then may be fed until the latter part of August or the beginning of September; at which time it is to be turned over with the plough, and prepared for a future crop of grain. Wheat succeeds well, but there is some contrariety of opinion as to the mode of putting in the seed; the usual practice is to cross plough and break up the sod before the seed is sown; but those who have practiced it, think the crop succeeds best when the seed is sown on the top of the furrows, and for this purpose the earth, after being well turned over, is rolled and merely harrowed. The seed is then sown and dragged in with a light harrow, or ploughed in the way of the furrows, with a very light plough; but not so as to disturb the sod.

Some farmers, who have not made themselves acquainted with the use of the roller, have adopted the following method: they simply turn over the sod, and then cast the seed immediately on the top of the furrows; but it is obvious that passing a roller over the surface, and then a light harrow, would have the effect to fill up the interstices of the furrows, and render them more fit for the reception of the seed; besides, it would render the earth more compact, and press it more closely on the green crop turned under, and this is considered very essential in order more readily to perfect its decomposition, and thereby render it subservient to the growth of its successor, for which purpose it is buried.

Many farmers prefer Indian corn, instead of wheat, on the sod, and some difference of opinion exists as to the propriety of turning over the sod in the fall, or in the spring immediately before planting. It should always be turned over in the fall, before it has ceased growing, and in the spring after it has pretty well advanced.

It seems to be agreed on all hands, that three successive crops are all that should be attempted before the field be again seeded, and the same rotation of crops be pursued. Under this course the quality as well as the quantity of the produce will annually improve, and an increase of fertility be constantly added to the soil.

This soil would receive great and lasting improvement from the transportation of the marl which lays at the bottom to the surface. This would give more tenacity &consistency to the soil, and prepare it more effectually for the benefit of the vegetable manure, which is to be supplied by frequent seeding. With this dressing all those sandy hillocks, which are blown about like snow-drifts, might be reclaimed and converted into ornamental as well as profitable appendages to the farm.*

The practice of clovering and plastering has been resorted to, and is in general use for the purpose of improving the soil; and it is universally acknowledged to be by far the cheapest and best method hitherto adopted. Much complaint is, however, made of the liability of the clover to be killed out during the winter; but several distinguished practical farmers speak with confidence, that if the seed be ploughed or well harrowed in, and then well rolled, this evil will no longer exist. Covering the seed when it is sown, is in practice with some farmers, and the effects resulting from it justifies the procedure; but the roller, so far as my knowledge extends, has seldom been used on these soils, although it has been resorted to, and, indeed, is in general use with some of the farmers on the loamy soils, where its good effects have not been denied by any.

The idea of rendering the earth "*mellow*," for the reception of the seed, which means, to have it finely pulverised and light, in common language, "*like an ash heap*," does not appear to be so important as many of our farmers seem to imagine. The great object of ploughing, is to destroy and cover in the earth every species of vegetation, that the crop expected from the seeding may have nothing to choak and impede its growth, or deprive it of any share of the nu-

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* Some years ago I published a paper on the existence of marl in this country, and its application as a manure; but I have yet to learn whether any use was ever made of it.

The Agricultural Society of this county have this year, (1822) awarded a premium of $6 to Gilbert Waring, of the town of Saratoga Springs, for the best experiment with marl—(I believe there was no competion.) He applied it to some light sandy knolls, which were so poor as to be incapable of producing even weeds. The rest of the field, excepting several of these hillocks, was a thick clover sward, which was turned over in the fall, and about the same time the marl was conveyed to these barren spots, in the proportion of from 60 to 100 loads to the acre. In the spring succeeding, the whole field was planted to Indian corn. The young plants on the places where the marl was applied, began to distinguish themselves at an early period, by a much darker color, and a more luxuriant growth, which they continued to exhibit through the season; and at harvest, the crop was judged to be one third better than any other part of the field, from an equal quanty of ground.

The marl which was used has the appearance of *blue clay*, but effervesces very strongly with acids.

triment that there is in the soil, which would be useful to its own health and vigor; when this object is effected, the plough can be of no further use, except to cover the seed.

The prevalent opinion, that turning in the *dew*, or exposing a *new surface* of the earth frequently to the rays of the sun, enriches the soil, has likewise no foundation in fact. The earth can imbibe nothing from the sun's rays but heat and light, which it possesses in sufficient quantity for all the purposes of vegetation, where it has not been used at all. Who has not observed the most luxuriant spontaneous productions, where the soil had not been stirred for years? and it is maxim with farmers, that "where weeds grow luxuriantly, any other vegetable will." Indeed, the frequent exposure of a new surface of the soil, during the summer months, must expose the volatile principles which it may contain to exhalation, and thereby endanger the loss of one essential article to its fertility, which, in soils that contain much animal matter, is very considerable. The turning in of the dew, is equally absurd; it can contain no ingredient that is not found in rain water, which is nearly pure. The dew is simply the exhalations of the day, which are condensed during the cool of the evening; like rain it forms an essential moisture for the support of vegetation, but can have no other effect.

I saw several fields, in the town of Providence, in the fall of 1821, where rye had been gathered which had been sown the fall before, on sward or old pasture; the grass among the stubble was undoubtedly more abundant than it had been for some years before it was ploughed. This could not have failed of rendering the crop much less productive than it otherwise would have been, for besides diverting a share of the nutriment in the soil from the rye, it must have crowded and prevented its spreading.

This luxuriant growth of grass was, undoubtedly, owing to two circumstances in the mode of tillage: 1st, the imperfect manner in which the sod, during the first ploughing, was turned over, owing to the great number of loose stones, which impeded the free and direct motions of the plough; and 2d, to the subsequent dragging and cross-ploughing, which had the effect to place a great proportion of the sod grass side up again, with the additional advantage of having the compressed and distorted roots torn asunder, and thinned in such a manner as to render them more susceptible of nutriment.

The evil might have been prevented, not only to the immediate advantage of the crop, but to the permanent benefit of the soil, by devoting the time that was spent in "*cross ploughing and harrowing*," to removing the impediments to the free motions of the plough, and then carefully turning the sod so effectually as perfectly to cover the face of it; a heavy roller then passed over the surface, would have the effect to secure it in its place, to press the loose earth more firmly into the spaces between the furrows, and prevent, more effectually, the possibility of its again vegetating. In this situtiou, it is ready for the seed, which should be covered with a light plough or harrow, special care being taken not to disturb or displace the sod which, thus confined, soon commences decomposing, or, in the common phrase, "*rotting*," thus furnishing an important and wholesome nutriment to the corn plants, whose roots are pushing in all directions into its substance.

The thick, stiff, and tough nature of the soil of this region, is offered as an objection to this mode of procedure. I am aware that the spontaneous grasses, particularly on a fertile soil, commonly produce a more stubborn and unmanageable sod than that produced by the grasses usually cultivated, but I believe no method will be found so effectual in decomposing it, as that of covering it closely in the earth. The objection, however, may be remedied by substituting the more useful grasses, as clover or timothy, which furnish a much better pasture, give a greater abundance, and a better quality of hay, and when turned under, yield a much more prolific ingredient to an exhausted soil. If this practice were pursued, I can see no reason why *wheat* cannot be produced here as well as in the adjoining town of Galway, where more wheat is raised than in any other town in the county, particularly should the mode of manuring with *lime* be adopted.

It should be observed, that in Galway, as in most places where wheat is raised in the greatest perfection, lime forms one of the ingredients in the composition of the soil, while in that of Providence, and in the whole of the primitive region of this county, where wheat is considered a very precarious crop, lime is hardly discernable among its component parts.

Experiments made with lime in Galway, and along the secondary region, have added but little to its credit as a manure. This result is owing to the soil already containing a sufficient quantity for all the purposes of vegetation. It is in the primitive region where this article is deficient, and where its application can be expected to have a good effect.

FREQUENT PLOUGHING.

That frequent ploughing is useless, and frequently injurious, may be further inferred from the experience of many of the most observing farmers. The practice of merely turning over the sod and sowing on the furrows, (see page 64,) is becoming every year more popular, and an intelligent farmer has just given me the following account of a process, which he tried the season past.

Having a clean clover field, which he intended to plant with Indian corn, a part of it was ploughed and planted in the usual way, while the other part was merely ridged or "*back-furrowed*," at sufficient distances for the rows, while the space between was left unmoved and green with clover, to be turned over to the hills during the process of hoeing; the corn was planted in the centre of the ridge. The success of this process was very observable through the season; the corn had a much more rapid and luxuriant growth, and at harvest yielded a considerable more abundant crop than the other parts of the field.

The result is imputed, by my informant, to the following causes: 1st. "the ground beneath the hills of corn remaining unmoved and covered by the furrows, retained the moisture longer than that which had been turned over and exposed to the air and sun; hence the plants did not suffer by the drought, as did those on the other part of the field." And 2dly, "the turning of the sod, which was permitted to grow between the rows, up to the hills at hoeing-time, furnished the roots, as they extended from the ridge, with a new supply of vegetable matter and moisture."

NATURAL MEADOW.

Perhaps no kind of land has been more eagerly sought for, or more highly prized as an appendage to the farm, by the most of our farmers, than what is usually termed "*natural meadow*," and yet probably no part of the farm is so *unprofitable*. The object is to secure a crop of hay, which it seldom fails to produce; but, it should be remembered, that the quantity is always much less than what might be produced from the same quantity of land by cultivation; its quality is vastly inferior, and the land is totally lost to the production of any other crop. I have frequently counted ten and twelve different species of grass within the compass of a few rods square, and not more than one or two of them that has ever been noticed as furnishing food suitable for the sustenance of stock, to say nothing of the great variety of ferns, rushes and mosses growing upon the same spot, which every farmer would be pleased to have annihilated.

Every farmer should calculate upon the cultivation of grass, as he does upon that of his grain; he will then be sure always to have a supply, and that too of a quality agreeable to his choice, while the system, if properly pursued, will have the effect to increase the quantity and quality of all his other crops to a degree, that those who are not acquainted with the facts, can hardly believe.

The question has often been asked, What shall we do with the field? it is too wet to plough. The answer *is, drain it.* I have seldom seen a field of this description but what might be drained for a sum considerably less than what the first crop would amount to, and the effect of draining, if properly executed, is permanent.

Since the introduction of gypsum as a manure, the plain lands have greatly increased in value and importance in the estimation of farmers generally; indeed these lands have been commanding a higher price, in this county, than those of any other description, under the same state of cultivation, and it is now believed, by those who have the best opportunity to judge, that no soil can be brought so easily and cheaply into a state of profitable cultivation as that of the plains. This opinion has caused them to be sought after more, and, of course, has raised their value. The soil of these plains being naturally light, is soon exhausted by improper tillage; but where the plan laid down in pages 63 and 65 has been adopted and pursued, there has been no depreciation in its productions, but, on the contrary, they have been almost incredibly augmented.

The subject which excites the most serious apprehensions with regard to the profitable tenure of this class of soil, is the deficiency of fencing timber; but this defect will probably be supplied by the introduction of "*hedges*," and it is believed that our own forests contain the necessary materials for effecting this object, in the CRATÆGUS CRUSGALLI, or COCCINEA, (*common thorn-bush.*) There are several species of this shrub, natives of the soil, some of which will unquestionably answer our purpose better than any that can be introduced from abroad.

The first and only attempt, which I know of in this country, to bring this system into operation, was undertaken by Mr. Davis, on land belonging to J. K. Beekman, Esq. During the fall past, 500 of the plants of this shrub have been placed by Mr. Davis in regular order to form a hedge; they are planted in two parallel lines, twelve inches a part, and at regular intervals of six inches. Mr. D. has likewise planted a quantity of the seed, with a view of ascertaining the best method of obtaining the plants. This is an experiment of much interest, and the result will be looked for with anxiety.

LEAVES FOR MANURE.—This is a good season for farmers to gather leaves for manure; as they have lately fallen, they may be handled more conveniently now that when they are very dry and liable to be blown away by the wind. Leaves may be mixed with manure, or put with earth in layers to hasten their decomposition. Scrape up manure around buildings, about old fences, from drains and other places, collect mud turfs, &c. &c. and put them in layers with leaves, to which add a quantity of lime more or less according to the expense. The lime will produce heat and hasten the decay of the leaves. But they will make good manure for potatoes if they are used before they are decomposed. Now farmers, stir yourselves and see if you cannot have a large pile of manure beyond your usual quantity, and you will soon improve your farm and reap a rich reward for your labor. Remember 'manure is wealth.' Dig around your fruit trees that are in danger of being *eaten up* by the grass and weeds; put leaves around them, mix them with the earth and throw over them the sods with the grass downward and hoe them now and then to prevent the grass growing near them especially if the trees be small. Try an experiment by manuring some trees in this way and leaving others, and if you dont find an advantage in it we will pay the expense.—*Yankee Far.*

HOW TO HAVE MINCE PIES ANY TIME.—Prepare your meat by boiling and chopping, as though it were for immediate use—mix it with a suitable portion of suet, spice and salt—then put it in an earthern pot, pound it down with a pestle, and then cover it with the best of molasses, keep it where it will not freeze, and it will be fit for use any time. My wife has adopted the above course for four or five years, with perfect success; so that we have had mince pies made from meat killed in December, as constant in July following as in January, and quite as acceptable.—*Maine Farmer.*

COMMUNICATIONS.

Statistics of Rochester—No. 3.

From Notes made by Henry O'Reilly.

COMMERCIAL BUSINESS.

It would be difficult to imagine an interior city better located than Rochester for *Commerce* as well as *Manufactures.*

As this sketch may fall under the observation of persons unfamiliar with our localities, it may be well to state that the Genesee River runs northwardly through Rochester to Lake Ontario, while the Erie Canal crosses the city east and west—that the river is navigable for boats for nearly 40 miles *south* of Rochester, while Lake vessels of the largest class ascend the river to the *northern part* of the city, distant from Lake Ontario five miles. A Rail-Road, two and a half miles long, connects the Erie Canal in the Southerly portion of the city, with the Port of Rochester, in the northern part—thus greatly facilitating the transit of goods and passengers between the waters of the Canal and Lake. Thus, in addition to the advantages of the Grand Canal for the transportation of our products to the seaboard or into the vast interior along the shores of the great Lakes and Rivers of the west and southwest—Rochester has a direct communication by steamboats and schooners to all points on Lake Ontario, from Burlington Bay to the St. Lawrence; and can by this way forward its goods through the Welland Canal to the Upper Lakes, or through the St. Lawrence to the cities of Montreal and Quebec—thus possessing a choice of markets, of essential consequence to its prosperity. The richness of the Genesee Valley is rendering the navigation of the River south of Rochester, an object of growing importance; and a steamboat, like those on Connecticut River above Hartford, was last year added to the vessels commonly navigating this portion of the River, which navigation, short as is its course, brings to Rochester (as the *Am. Encyclopedia* remarks) "much of the products of a fertile south & south-west country of 2,000 square miles in extent." It may be added, that a Canal of 50 or 60 miles, from the point to which the river-boats now ascend South of Rochester, would connect the navigable communications of the State with the Allegany River at Olean—though the project most favored is for a Canal the whole distance from Rochester to Olean, 90 miles. The completion of this project would furnish a direct water communication from Rochester to the Atlantic, through the Allegany, Ohio and Mississippi—just as we now have outlets for our products to the same ocean, through the Erie Canal and North River to New York, and through Lake Ontario and the St. Lawrence, in a northerly direction.

ERIE CANAL TRADE.

Thus situated—with such facilities for trade, as well as manufactures—it is not surprising that Rochester should become largely interested in the forwarding business, especially on the Erie Canal—though it *will* probably surprise many even of our own citizens to learn that our Forwarders have become interested in the Transportation and Packet Lines to the great extent that they actually have. The amount of stock in those Lines, now owned by citizens of Rochester, exceeds ☞ THREE HUNDRED THOUSAND DOLLARS—a larger amount than is owned in those Lines by the People of any other city of the State. Well might the Editor of the *Encyclopedia Americana* assert (even in 1831—since which our citizens have become still more largely interested in Canal Trade) that the great number of "boats, built, equipped and owned principally "at Rochester, make it the seat of the Transportation business, boat-building, and trades con-"nected with it, giving employment to [six] ex-"tensive boat-building establishments, of between "30 and 50 men each, besides joiners, smiths, "&c." "The superior white oak and pine lum-"ber here, with its central location at the turn-"ing point of water-conveyance between the "west, New York and Montreal, confer these pe-"culiar advantages on Rochester."—*Enc. Am.* Vol. XI. page 54.

The amount of Canal Toll collected at Rochester this season, (up to Nov. 17,) notwithstanding all the reduction of Toll, is about *one hundred and seventy thousand dollars*—being several thousands more than was received last year, and more than the receipts of any other collection office west of the Hudson.

The names of the Canal Lines, with the amount of stock held in them, by the Rochester Forwarders, are as follows:

Names of Lines.	*Stock held in Rochester.*
Pilot and Trader's,	48,000
Transportation Line,	$6,000
New York and Ohio,	12,500
Washington,	4,000
Erie and Ohio,	24,000
Troy and Ohio,	20,000
Troy and Erie,	7,000
United States,	12,000
Buffalo,	12,000
Detroit,	24,000
Telegraph,	8,000
Clinton,	13,000
Merchant's,	27,000
Commercial,	16,000
N. Y. and Michigan,	7,000
Rochester,	5,000
River-boats, including Steam-boat on the Genesee,	20,000
Transient and wheat boats,	10,000
Eastern and Western line of Packets,	25,000
	$300,500

PORT OF ROCHESTER—NAVIGATION OF LAKE ONTARIO.

Although much less attention is paid to the navigation of Lake Ontario than its importance demands from the citizens of Rochester, (their interest being now most largely in the manufacturing and Canal Transportation,) the facilities offered for Trade and Traveling by the Steamboats and other Lake craft have added much to the importance of the place within the last two years. Five Steamboats have touched regularly in their trips up and down the Lake—affording daily opportunities for reaching all prominent points on its shores, from the Niagara to the St. Lawrence. Numerous Schooners also facilitate the intercourse wish our Canadian neighbors, as well as along our own shores.

Judging from the interest lately awakened on this subject, it may be reasonably anticipated that the enterprize which has so signally marked the Manufacturing and Canal operations of our citizens, will shortly be directed to the construction of some additional steamboats for insuring to this place a further participation in the trade and travel of the Lake.

The revenue accruing at the Port of Rochester this season, on imports from Canada, is about $26,000—a larger amount probably than has been collected at any other port, save one, on either of the Lakes.

RAIL-ROADS—CONNECTING ROCHESTER WITH LAKES ONTARIO AND ERIE.

Besides the Rail-Road (two and a half miles long) which connects the Erie Canal with Genesee River and Lake Ontario, which has been in operation three years—there is another Rail-Road of great importance to Rochester. The "Tonawanda Rail-Road," as a link for connecting Rochester with Lake Erie, by a route south of the Erie Canal, is advancing towards completion so rapidly, that the whole line from Rochester to Batavia and Attica, between 40 and 50 miles will be finished next year. The track is now used as a part of the Mail-Stage route as far south west as Churchville, fourteen miles from Rochester This Rail-Road acquires additional importance from the fact that it will soon be connected with others which will form a connected line from the Hudson to Lake Erie. The Schenectady and Utica Rail-Road will soon, in connexion with the "Mohawk and Hudson," bring this chain as far west as Utica; and the exertions of the people of Syracuse, Auburn, Geneva, Canandaigua, &c. render it certain that the route will speedily be completed to Rochester; whence, as already stated, the "Tonawanda Rail-Road" will continue it to Batavia and Attica, from which another short route will strike Lake Erie, either at Buffalo, or at a point on the Lake south of that city, so as to avoid the inconveniences of the ice which not unfrequently impedes the navigation about Buffalo, while other parts of the Lake are free. Such is the great plan, now being carried into execution near both extremities of the route, for connecting the Hudson with Lake Erie by a line of Rail-Road nearly along the route of the Canal. This, with the projected Rail-Road through the southern tier of counties, (part of which is now under contract, and the whole of which will unquestionably be completed as speedily as possible) will form three great lines of communication between the Hudson and Lake Erie—two by Rail-Road and one by Canal. The Tonawanda Rail-Road will be of much service in facilitating the transit to this city of vast quantities of produce from the fertile region it traverses—and particularly in helping to supply the immense consump-of wheat in our flouring establishments.

ROCHESTER POST-OFFICE.

The Post-Office business.—no unsatisfactory indication of the intelligence and enterprise of a community.—is larger than that of any other city in this State, save New-York and Albany; the annual receipts amounting to TEN or ELEVEN THOUSAND DOLLARS.

AS FOR THE MERCANTILE BUSINESS—

It was designed to enumerate the stores of various kinds in the city; but that may be considered almost a work of supererogation, as every intelligent reader can judge somewhat of the great extent of Mercantile business in a city so deeply interested in manufacturing and commercial pursuits. The large amount of produce bought for the supply of our mills and for exportation, throws into circulation vast sums of money, which enable the farmers to deal with our

merchants and manufacturers in the mode most satisfactory to buyer and seller—for *ready cash.* The *millions of dollars* annually disbursed for wheat and all the other products of the husbandman—with the vast sums put in circulation by our extensive manufactories and by the commerce of Canal and Lake, placed the mercantile business of Rochester on a foundation too firm to be shaken by the convulsions to which the money market has been subjected within the last two or three years. The Storekeeper, like the Miller and Forwarder—like the Manufacturer and Mechanic—participates with the Farmer in the signal prosperity which has placed Rochester so high in the rank of cities, and rendered it emphatically "*the New York of the West.*"

. . . . . .

It has been well remarked, that "Yankee enterprise and Dutch perseverance" are among the mainsprings of the prosperity of this state. It would seem as if the influence of both were happily blended in the extraordinary progress of our city.

Monarchs may create cities through the labor of their vassals—lordlings may beautify their towns with palaces, and a political priesthood rear gorgeous temples to the Almighty, through the gold wrung by taxes and tithes from the hard hands of the farmer and mechanic;—and the traveler may revel in such scenes amid all the charms which power, wealth and art can bestow. —But in all this display, what is there to compare with the moral grandeur of the scene by which we are *here* surrounded? ☞ A city of fifteen thousand, unsurpassed for the beauty or comparative number of its religious edifices—whose dwellings and factories are equally indicative of prosperity and comfort—and whose manufactures already amount to millions!☜ Such, such is the scene which challenges admiration here—*here*, where the wolf and Indian prowled so recently that there are among our whole population not five persons of manly age who were born within the city limits!—where the forest has been subdued, natural resources developed, and a dense population collected, with a suddenness and success unparalleled even in a land proverbial for enlightened enterprise! Rho.

On Improved Short Horns.

The importance of *improved* breeds of Cattle, is becoming more generally acknowledged; and we have been gratified in observing the spirit and enterpize of our most intelligent farmers in procuring this kind of stock. The advantages cannot be too fully or too frequently exhibited; and we select the following paragraphs from a long article, comprising much interesting matter, in the Edinburgh Quarterly Journal of Agriculture, on Short Horns, by James Dickson, Cattle Dealer of that city.

"The external appearance of the Short Horn breed is irresistibly attractive. The exquisitely symmetrical form of the body in every position, bedecked with a skin of the richest hues of red and the richest white, approaching to cream, or both colors, so arranged or commixed as to form a beautiful fleck or delicate roan, and possessed of the mellowest touch,—supported on small clean limbs, showing like those of the race-horse and the greyhound, the union of strength with fineness; and ornamented with a small lengthy* tapering head, neatly set on a broad firm deep neck, and furnished with a small muzzle, wide nostrils, prominent mildly beaming eyes, thin large veiny ears set near the crown of the head, and protected in front with semi-circularly bent, white or brownish colored *short*, (hence the name) smooth, pointed horns;—all these several parts combine to form a symmetrical harmony, which has never been surpassed in beauty and sweetness by any other species [variety] of the domesticated ox.

"Enthusiastic as this language may be considered when applied to the external beauty of cattle, it is not more so than the beauty of cattle is entitled to; for when it is considered that symmetry of form generally accompanies mellowness of touch in the skin, and that both constitute the true index to a disposition to fatten, the most *useful* property of all, beauty of external appearance is too valuable a criterion to be overlooked. Fortunately indeed, beauty cannot be overlooked in cattle, for even were it useless, it is so irresistibly engaging, that the judgment of a stoic would be biased in its favor. To my taste, nothing can be so attractive a spectacle of the kind as a show of fine bred Short Horns in high condition.——

"In a breed of cattle evincing a disposition to fatten, it is erroneous to suppose that this property is only obtainable by an extraordinary consumption of food at an unprofitable rate. I have heard this supposition frequently asserted as an undeniable truth by many farmers who were unacquainted with Short Horns. Indeed such a supposition can only have arisen from ignorance of the constitutional habits of that breed. It is well known to every feeder of cattle that every ox in the same lot does not feed alike; and to what does he attribute this difference in the capability of feeding, but that one ox is a "harder feeder," or in other words, is more difficult to feed than another? He does not maintain that the hard feeder consumes *less* food than the kindly feeder, for he sees and knows the reverse to be fact. On the contrary, he allows that the difference of feeding arises from a difference in the "nature," or in other words, the *disposition* of the animal. He observes that a restless ferocious disposition not only prevents the possessor of it from feeding, but his companions also. It must therefore be allowed that an ox of a kindly, will lay on more beef with the same quantity of food than one of an unruly and churlish, disposition; and hence it is more profitable to feed an ox of a kindly than of an opposite disposition. Still a difficulty may reasonably arise in the mind of one unacquainted with Short Horns. He may acknowledge that an ox of gentle disposition may lay on more beef with the same quantity of food; but knowing the hardness of feeding exhibited by some kinds of cattle, that property of itself cannot convince him that it may not cause more food to be consumed than the larger quantity of beef obtained, may be profitable. To one unacquainted with the disposition to fatten in Short Horns, this difficulty in feeding may appear insurmountable. But experience would soon prove to him that Short Horns not only possess disposition to fatten, but that they consume less and less food *in proportion as they attain weight and fatness.* Disposition to fatten, therefore, means not only the acquisition of more beef with the same quantity of food, but the diminished consumption of food in proportion to the weight of beef acquired.

"The profit arising from feeding Short Horns may be exhibited from a few instances. I have seen Mr. Thomas Smith of Grindon, receive at Whitsunbank Fair, for four-year old steers £44 a piece. [$195,55.] The late Mr. Robertson of Ladykirk has frequently received £35 [$155,55] a piece for three-year olds. I remember in 1815 that he showed at the meeting of the Border Union Agricultural Society at Coldstream, 2 three-year old oxen, which were computed each to weigh 110 stones. Happening to be at Morpeth market a short time afterwards, I saw these two oxen with six others, sold for £45 a-piece, and the two were resold before they left the market at sixty guineas [$280] a-piece. Mr. John Rennie used to realize £40 a-piece for three-year old oxen, at the sales which annually took place at Phantassie. I have seen the late Mr. George Brown, who was in Whitsome Hill, Berwickshire, in 1815, sell the whole cast of his beasts, twenty in number, at twent-five guineas a-piece.——

"Disposition to fatten insures another valuable property—EARLY MATURITY. This property is almost peculiar to Short Horns. It is obvious that a disposition to fatten cannot develop itself till the ox is supplied with more food than will merely support life. Young cattle are frequently restricted to such quantity of food as will only support their growing condition. This practice probably had its origin in that period of husbandry when the raising of food for animals attracted little attention from the husbandman; and even after food became more plentiful, young cattle were restricted in its use, from a conviction erroneously acquired, that only cattle of mature age could be fattened. This prevalent practice confirmed a habit of treatment which was extended to Short Horns till a very few years ago. It was a prevalent custom for breeders of Short Horns to keep them till four and sometimes five years old, before they were fed off. Now that the breed is improved and generally distributed, a more profitable system obtains. Three yrars is the longest period, and very frequently oxen are fed off at two years of age. I have frequently seen Mr. Robertson have two and a half year old steers sold for £26 a-piece and brought to a weight of 72 stones each. The late Mr. Abraham Wilson, of Edington Mains, used to bring two-year olds to 80 stones, and sold them at £28 a-piece. Mr. John Rennie of Phantassie often exhibited two-year olds at 80 stones each,and realized £30 a-piece for them. At the great sales of stock which took place at Phantassie, Mr. Rennie always realized £30 [$133 1-3] a-piece for two-year olds.—— ——

"Many breeders, eminent as first-rate farmers, have no desire to sell their cattle till they have attained the age of three years.—I am of opinion however, that the two-year old system is more profitable. The object of all farming is profit, and can best be obtained by supplying cattle with more food, and keeping them a shorter time on the farm than three-year olds generally are, provided they can be brought to *maturity* at an earlier age.

"I have already shown that Short Horns can be brought to maturity at two years old.——

"Besides being of EARLY MATURITY, Short Horns yield beef of fine quality. It is the opinion of many breeders, particularly of black colored cattle, that a four or five-year old Scotch ox carries finer quality of beef, which fetches a higher price per stone than a young ox. If both the oxen are equally ripe, the difference in the quality of the beef is not discernible; and a well fed two-year old Short Horn heifer will fetch as much per stone at Morpeth market, if not more, for cutting up, than any aged ox. This preference to heifer beef holds in other markets in the north of England, as the Darlington, York, Skipton, and Wakefield. The reason for this preference is obvious,—there is scarcely any coarse beef in Short Horn heifers; they carry most of it on their backs and other valuable parts; on all those parts in short which yield roasting rather than boiling beef. Roasting and steak beaf will fetch in every market a higher price than boiling beef. I have seen lots of steers and heifers bred and fed together, and when brought to market, the heifers, although four or five stones lighter than the steers, would fetch a higher price per stone, on account of their finer quality, which is always held in high estimation. In other parts of England however, heifer beef is not preferred to ox.—It is difficult to account for the predilection for ox beef in one part of the kingdom, and for heifer beef in another.——

* Some British critics, more distinguished by unamiable feelings than literary research, rejected this word as one of *American* origin, and much learned dust was raised on the occasion. Its employment in the present instance however, is unfavorable to that supposition; and Webster in his octavo Dictionary refers to its use by Lord Byron and by the London Quarterly Review.—Ed. Gen. Far.

"Natural docility of temper, which the Short Horns possess in a remarkable degree, renders their disposition to fatten more effective. A good tempered animal receives all the benefits to be derived from the food which he consumes. This is very apparent in feeding oxen. But the bulls even are gentle, and never become mischievous, excepting under particular provocations; and the cows, and heifers, and calves, can be approached for any purpose at all times, in the field and in the house.——

"This hasty enumeration, shows how the Short Horns are spreading over the face of the country. Such an important result could only have occurred from a conviction of the superior properties of this breed; for perhaps no breed of cattle has had to encounter in so great a degree, unmerited obloquy and dogged prejudice, as it had north of the Forth. Let any man who is well acquainted with the profitable properties of Short Horns, recommend them to a north country farmer, and he will be instantly met with this plausible but disparaging remark, "They may be very well adapted to your fine climate in the south country, but they could not thrive here on our poor meat, like our own black cattle." To attempt to prove the fallacy of this assertion, for it is nothing else, by an appeal to facts established by the experience of south country breeders, would be of no avail, for dogmatic assertion overrules every argument. But now that the experiment of breeding them has been tried before their very faces, in their own country, and along side their own favorite breeds; and that it has been proved beyond contradiction that they will get fatter on the same *keep*, and will endure quite well the ordinary climate of the plains in Scotland, dogmatists dare not now be so bold. Strange that so much proof is requisite to convince men to enhance their own interest by adopting that breed which under similar circumstances would leave them the larger profit. No doubt Short Horns require adequate food and requisite attention; but what superior thing can be obtained without corresponding trouble? I can say however, that I have seen Short Horns bred and fed on all sorts of land, and sometimes in high districts, and indifferent climate, and have known them to do well in all situations. Nay, some of the farmers in high districts in the south of Scotland, where they are now kept, not unfrequently beat their neighbors in competition, who are in lower situations and finer climate. In any situation, two-year olds will fetch from 15 to £20 a-piece, and three-year olds from 20 to £25. Can such prices be obtained for any other breed of cattle?——

"It has been frequently asserted that Short Horn cows are bad milkers, indeed that no kind of cattle are so deficient in milk. Those who say so do not know the still greater deficiencies of the Herefords, a species of cattle quite unknown in Scotland. The higher bred stocks of the Messrs. Collings, Mr. Mason, and Mr. Robertson, yielded little milk. Indeed, Mr. Robertson's cows could not supply milk sufficient for their own calves, at least not in the quantity which it was desirous by him they should receive. Cows are kept for the purpose of supplying the deficiency of milk of the high bred cows. But this deficiency of milk did not altogether proceed from the circumstance of the cows being of the Short Horn breed; but because those eminent breeders devoted their whole attention to the development of flesh, and not at all to the development of milk. Had the flesh been neglected as much as the milk, and the property of giving milk as much cherished as the development of flesh, their Short Horn cows would have been deep milkers. As it is, the generality of Short Horn cows are not bad milkers. Indeed it is not to be doubted that where the general secreting powers of the animal system have been increased, as it has been in that of the Short Horns, the power of secreting milk will be increased with the power of secreting flesh and fat; all that seems requisite is to encourage the power of that secretion which for the time is most wanted. I have no doubt that it is completely in the power of the breeders of Short Horns to make them good milkers. It would be to desire an impossibility, to desire the full development of flesh, fat, and milk at the same time; but there is no absurdity in desiring a large secretion of flesh and fat at one time, and a large secretion of milk at another, from the same cow. Accordingly this is the very character which has been acquired by Short Horn cows. They will yield from six to sixteen quarts a-day throughout the season; and they are so constant milkers that they seldom remain dry above six weeks or two months before the time of calving. I know a Scotch breeder who had a Short Horn cow which gave fifteen quarts a-day during the flush of the grass in summer, and never went dry for two seasons.

"But the practice of the owners of public dairies in towns, were there no other proof, would prove the milking powers of Short Horn cows. They prefer them as the greatest and most steady milkers; and it is now difficult to see cows of any breeds but Short Horns, or crosses with them, in these dairies. In London, Edinburgh, and Liverpool, fine Short Horn cows may be seen at the public dairies. They are bought by the milk-men whenever they come of age, that is, about five orsix years old. They give milk till they attain the age of eight or nine, and are then fed off fat for the butcher. These cows *can* be fed off fat. This property and that of milking, prove clearly that Short Horns possess both in a remarkable degree. They do not, it is true, possess both in an eminent degree at the *same time;* but they exhibit either property *separately* when it is desired. They thus give a return in flesh for part of their original high price, while they remunerate their owners in the mean time with an abundance of milk for their food."

From the Cultivator.

Experiment on Feeding Calves.

J. Buel, Esq.—If nothing of more importance is on hand to fill a column in your useful Cultivator, the following is at your service, to dispose of as you see fit.

As it is difficult to speak of one's own concerns without egotism, I hope that fault will be pardoned.

Long and careful observation has convinced me, that cows give more milk through the season, to take their calves from them the first or second week. Calves, with kind treatment, will usually in two or three days, learn so as readily to drink the milk when presented to them, but they require about one-fifth more milk when fed to them; probably the saliva they swallow in sponging the milk from the teat may account for the difference, but they learn to feed on grass or fodder younger, and their food may more gradually be changed from milk to other feed, than can conveniently be done with a suckling.

Calves suddenly taken from a liberal supply of milk to grass, are frequently affected with a diarrhœa that sometimes proves fatal.

I must acknowledge that I have been prejudiced against making any substitute for milk for the first ten or twelve weeks, with any expectation of raising a thrifty animal, till last year, 1834, I had two heifer calves dropped the 4th of May; anxious to raise them, although of our common breed, but their dams were excellent milkers, I determined to try to raise them on whey. When they were four weeks old, I began to mix whey and a small qantity of shorts of wheat with their milk, and gradually lessened the proportion of milk, till they were five weeks old, and then stopped the milk and fed them whey three times a day, and at morning and evening mixed a single handful of shorts for each calf with the whey; at noon, fed the whey alone. We set the whey in a clean vessel in a cool place, where it would not sour, for evening, warming it to near animal heat. In the morning, fed the first whey dipped from the cheese, and when about ten weeks old, one of them was killed by accident; to the other we fed shorts till it was three months old; after fall feed was good, we fed her whey twice a day for a time, and then once a day as long as we made cheese. In the winter, besides hay, she was fed a single handful, about two-thirds of a gill of flax seed, mixed with a pint of wheat bran, twice a day; did not feed her any higher, as she was in as good flesh as was desired. She is now the largest heifer of her age in the vicinity—is as large as my two years old heifers that had a liberal supply of milk for the first ten or twelve weeks, and much more grain the first winter.

This year, 1835, we have fed two calves in the same manner; one of them has had no milk since it was twenty days old; it was in as good flesh, but I think did not grow as fast for two or three weeks as it would on milk; they are doing as well as the one last year. I think they are now gaining of some calves in the vicinity that run with their dams.

From the above observations, I have drawn the following conclusions:

1st. That a calf may be raised well, on less than half the milk required to fatten it; that if they do not grow as fast for two or three weeks, they will gain it the latter part of the season, and be better in the fall than those fed in the usual way.

2d. That the feed of calves should not be changed suddenly from a liberal supply of milk to grass, as it would not be very dissimilar to forcing a plant forward in a hot bed, and then transplanting it into the open air, when the temperature is but just above freezing.

3d. That it is more profitable to feed whey to calves than to hogs.

4th. That the practice is inexcusable of slaughtering calves and throwing their flesh to the hogs, because their milk will fetch more in cheese, than the veal will for the table. If the Creator had given us liberty to destroy the lives of his creatures thus wantonly—the flesh of swine thus fed must be unwholesome food. The fluids and flesh of carniverous animals, or such as feed on flesh, are highly charged with acrid particles, which may strictly be termed poisonous. It is believed that nothing but extreme hunger will induce one carniverous animal to eat the flesh of another, except that dogs kept on vegetable food have sometimes been eaten by wolves; and it is believed that the flesh of dogs thus fed, would be less deleterious than pork fed on flesh; pork thus fed, should be prohibited from being sold for food, as it is calculated to produce the most virulent disorders, such as putrid fevers, cholera, &c.

M. R. Porter.

Fowler, Trumbull co., Ohio, Oct. 12, 1885.

From the New England Farmer.

Farmer's Work.

Mangel Wurtzel for Cattle.—It is stated in the Farmer's Journal, an English agricultural paper, that Mangel Wurtzel roots should not be fed out to cattle till about February. "Mr. Coke grew them some years ago, and his servants, not knowing their qualities, fed the stock with them in autumn all they could eat; the the consequence was that they were seized with a paralytic disorder, but the greater part, if not all, recovered, by changing their food." The tops, however, produced no bad effect, and they are an excellent food for cattle in autumn.

The Grazier's Guide observes, that "Mr. Pomeroy, an eminent farmer, ordered three wheelbarrowsful of this root, fresh pulled from the ground, to be thrown to his cows on a pasture. The food was so delicious, that they contended for exclusive possession; and the strongest having succeeded, she continued to devour the roots with avidity, till they were all consumed, and herself gorged beyond the possibility of recovery. But in this case, instead of paralysis, the same symptoms took place as are caused by unrestrained feeding on clover. The rest of the cows were subsequently fed upon the same diet, but given in moderation, with a proportion of hay, and they continued in perfect health.

"From all these observations, it would appear that mangel wurtzel is a valuable, nutritious root, well adapted to the feeding of cattle, and one from which no injury need to be apprehended, when proper care is taken in feeding the stock with a moderate quantity daily; like clover, turneps, and aftermath, it abounds in rich, nutritious

matter, and when used for food must be accompanied with a proportion of hay."

Wintering Cattle.—Do not undertake to winter more cattle than you have abundant means of providing for. When animals are pinched for food at an early period of their life, they never thrive so well afterwards, and never make profitable stock. It is recommended not to begin to fodder with your poorest materials. Cold weather will increase the appetite of your cattle, and they will eat food in mid-winter which they would reject at its commencement. They will also, at any time, eat materials, when cut with a straw cutter, which they would refuse at full length.

Leaves of Trees for Manure, &c.—In many places, it will be very good husbandry to rake up all the leaves of trees, and the mold which has been produced by their decay, which can be procured at a reasonable expense, and cart and spread them in your barn-yard, to absorb the liquid manure from cattle. The leaves may also be placed in heaps, in stacks, under sheds, &c., where they can be obtained to litter stables, &c.

Manure your grass grounds.—You may now carry out and spread soot, ashes, compost, &c. on such of your mowing land as may need manure. Though it is asserted by some that the best time for dressing mowing land is immediately after haying,—others contend that late in autumn is quite as well,—and there is no doubt but that either time will answer.—*Cultivator.*

From the Cultivator.

Patent Cheese-Shelves.

Mr. Buel—I deem it due to the public to offer for the columns of the "Cultivator," some notice of "The semi-revolving cheese rack or shelves,"—an improvement for which Mr. Henry Weber, of East Richfield, Otsego county, has lately obtained a patent, and which I doubt not will meet the approbation of every dairyman who will make trial of the same, and which, I think, will go into general use at no very remote period. The saving in labor and risk in the cheese are great, and the expense of fitting up a new room on his plan would not greatly exceed that in common use, as the room may be much smaller.

One rack with six shelves six feet long, 24 inches wide, set 11 inches apart, will hold 18 cheeses weighing from 100 to 140 lbs. each, suspended by a wooden shaft 2 inches square, resting on 2 rails extending the whole length of the room, 3½ feet high, or if only a single rack, on 2 posts; each rack requires about 4 feet on the length of the rails, to turn well,—and its cost will not exceed 6 dollars, including the materials of which it is made.

On this system the cheese dries much faster, as it is turned on to the dry side of the shelf every day, and has a sound and dry rind. He has one set of extra shelves, which are slipped in close above the cheese before turned, on which shelf the cheese lies when turned over; the others are then liberated for another rack, and so on through the room. By the aid of these 6 extra shelves the cheeses need not fall but a trifle if any. An examination of this improvement may be had by any one calling on Mr. Weber, at East Richfield, or the subscriber in South Trenton, Oneida co.

Ephraim Perkins.

From Lindley and Hutton's Fossil Flora.

Geological Changes in Great Britain.

That the face of the globe has successively undergone total changes, at different remote epochs, is now a fact beyond all dispute; as also that long anterior to the creation of man, this world was inhabited by races of animals, to which no parallels are now to be found; and those animals themselves only made their appearance after the lapse of ages, during which no warm-blooded creatures had an existence. It has been further remarked by Zoologists that the animals which first appeared in these latitudes were analagous to such as now inhabit tropical regions exclusively; and that it was only at a period immediately antecedent to the creation of the human race, that species similar to those of the existing era, began to appear in northern latitudes. Similar peculiarities have been also found to mark the vegetation of corresponding periods. It would hardly be credited by persons unacquainted with the evidence upon which such facts repose, that in the most dreary and desolate northern regions of the present day, there once flourished groves of tropical plants, of Coniferæ like the Norfolk Island and Araucarian pines, of bananas, trée ferns, huge Cacti, and palms; that the marshes were filled with rush-like plants fifteen or twenty feet high, the coverts with ferns like the undergrowth of a West Indian island, and that the vegetation thus inconceivably rich and luxuriant, grew amid an atmosphere that would have been fatal to the animal world. Yet nothing can well be more certain than that such a description is far from being overcharged. In the coal formation, which may be considered the earliest in which the remains of land plants have been discovered, the flora of England consisted of ferns in amazing abundance; of large coniferous trees, of species resembling lycopodiaceæ, but of most gigantic dimensions; of vast quantities of a tribe apparently analagous to cactæ, or cuphorbiaceæ, but perhaps not identical with them; of palms and other monocotyledones; and finally of numerous plants, the exact nature of which is as yet extremely doubtful. Between two and three hundred species have been detected in this formation, of which two-thirds are ferns.

Manufacture of Manure.

We hope our readers have perused the communication of our correspondent J. E. R. in our last, upon this subject. It is one of vital interest to the Farmer, and yet one which is exceedingly neglected. Almost every one has some means of accumlating manure, for as it is nothing more than collecting together, and decomposing or rotting animal and vegetable substances, and these substances being abundant and more often in the way than they should be, they certainly can be collected. In the language of our correspondent we would also say "let no man living say he has not materials for increasing his manure. Every farmer can get dirt to bank up his cellar—so every farmer can get dirt if he will, and make excellent manure of it. Never did Providence lavish on mortals a richer gift than is contained in our pond holes, on the margin of brooks—in sunken places, &c. We have often thought that if our farmers, who have teams that are lying idle half of their time, would either take them, or hire an extra hand to take them, say a fortnight or a month,& employ them exclusively for the purpose of scraping together materials for the formation of manure, it would be an excellent investment of time and money. In England we are told that a hand is employed as a ploughman—this being his sole business, and that is found to be a profitable division of labor. Now, although we cannot always regulate our operations by the rules and experience of other countries and climates; yet we think it would be a good idea to make it a specific and separate employment for a short time, of some good hand to gather muck and mud and leaves, and litter, for the barn or hog yard. We once knew a shrewd calcutating yankee who bought him an able bodied, long snouted hog, from a drove and devoted him to the business of muck stirrer, giving him just enough to eat to keep him strong and healthy, and scattering a few oats or corn about the yard to induce him to root and throw about the muck, which he did to perfection.—*Maine Far.*

Management of Colts.—The abusing of colts in the first winter, is why they prove so bad—for farmers seldom allow their weaned colts any food except hay and that is too often of an inferior quality. Thus are they stinted in their growth the first winter to such a degree, they never get the better of it. Colts should have the best of clover hay,—and their rapid growth would amply compensate the owner for a few bushels of oat meal and bran,—to be given them through all winter. In some countries they allow a young colt fifteen bushels of oats. After the first winter they will need no extraordinary feeding till they grow up. Were the above directions observed, we should soon see an improvement in our breed of horses. And it is reasonable to suppose they would be capable of doing much more work, and be likely to hold out to a greater age.—*Methuen Gazette.*

"Wisdom without honesty is mere craft and cosenage. A good life is a main argument."

NEW-YORK MARKET.

Saturday, November 21.

An important movement has taken place in flour. Georgetown and Howard st. have been bought up at $6 62*a*6 75; considerable Philadelphia and Brandywine at $6 62*a* 75 and some of other Southern sorts. New York city at $6 50 and pretty large lots of Western Canal at $6 50 up to $6 62, which last is now the current price for common brands with considerable sales; fancy brands sell at $6 75.

The movement does not appear as yet to be fully understood by the trade at large, but is supposed to have originated chiefly from the state of things at the South, particularly the high prices at New Orleans, which have prevailed for some weeks and prevented the usual supplies from that quarter going to the Southern ports of the U. States and the W. Indies. There has been an advance generally in all the Southern Flour markets. The following letter describes the state of the market in Philadelphia:

Philadelphia, Nov. 19.

"Our Flour market has been more active the present week than for some time past. There were about 4,500 barrels superfine sold yesterday, at $6 1-4, to speculators principally, whose opinion of an advance has been based on the high prices in the Southern Markets and the reported deficiency in the wheat crops of the Western States. Holders generally demand $6 3-8 to-day.

"Rye flour is wanted from Baltimore, at $4 1-4 to a greater extent than our market can supply. Last sales meal in bbls. $3 3-8; 300 hhds. meal have been sold for future delivery at $19. Wheat 120 cts., Southern Rye 86 cts., new Southern corn 66 cts. Oats 40 cts."

The stock of Western Flour is quite as large as usual, and the supplies comiug in plentiful, The Cotton market remains rather calm. Money and stocks as on Thursday.—*Journal of Commerce.*

Robbins' Planting Machine.

WITH this Machine Corn, Beans, Peas, Broom Corn, Mangel Wurtzel, Turneps, Onions, and seeds of almost every description, can be planted with more system and correctness than can be done in the usual manner of planting with the hand and hoe. One man may easily plant five acres a day, placing the seeds any given distance apart, from two or more inches, and in rows two and a half feet apart.

Machines can be had by applying to Reynolds & Bateham, Rochester; C. N. Bement, Treasurer of the State Agricultural Society, Albany; Bushrod Buck, Lanesborough, Berkshire county, Mass.; and Daniel T. Buck, Lowville, Lewis county, agent and proprietor for making and vending said machines, at all of which places it is intended to keep a supply on hand.

Lowville, Nov. 24, 1835. nov 28-6m

THE LATE EXTRAORDINARY FLOOD OF GENESEE RIVER.

The year 1835 will be equally memorable in Rochester and Buffalo, for the floods with which both cities have been visited—the one, from Genesee River—the other, from Lake Erie.

The late rise of the Genesee is probably unprecedented by any former floods of the River. At least, no freshet comparable to it has occurred within the knowledge of our oldest citizens. It may, however, find frequent parallels hereafter; for as the country becomes better cleared, the water (from the rain or thawing snow) will more *suddenly* find its way to the River, than could be the case from wild land.

By calculations made a few years ago by the Rev. Dr. Penny, formerly of Rochester, and now President elect of Hamilton College, it appears that the quantity of water in the Genesee river, in its *usual state*, is about 20,000 *cubic feet per minute*—with a fall within the city limits which makes it equal in force to 1920 steam engines of twenty horse power.

The greatness of the late flood may be estimated by the following facts, in connexion with the foregoing statement.

It seems that the quantity of water which passed in the Genesee through Rochester on this last occasion, was *two millions one hundred and sixty-four thousand one hundred and eighty-five* CUBIC FEET per minute!--upwards of 108 times more than the usual flow of the River, in the state in which the Rev. Dr. Penny measured it!

Knowing that Hervey Ely, Esq. had taken great pains to measure the volume of water during the late flood, a letter requesting the particulars for publication was addressed to him by Mr. O'Reilly while prosecuting his inquiries into the statistics of the city. The facts stated in the reply of Mr. Ely render his letter well worthy of preservation:

"*Rochester, Nov.* 11, 1835.

"HENRY O'REILLY, ESQ.

"Dear Sir—Your letter of the 5th instant came to hand through the Post Office.

"I took a measurement of the water of the River during the height of the late flood. From the several tests I made of the rapidity of the current, I am well satisfied that the measurement is as near *strict accuracy* as is within the bounds of practicability.

"The point selected for the measurement was between the South Bridge and Dam, where the waters are confined between two walls, except what was passing in the mill-races on each side—these latter were estimated, and the estimate added to the measurement of the main channel. The bed of the River at this point has an inclination to the East, which causes the water to be a few inches deeper on that side than on the west—this difference was in view in the measurement. Should you wish it, I will with pleasure lay the details before you, if you will take the trouble to call at my office.

"As for the result of these experiments—I found the quantity passing *each minute* to be TWO MILLIONS ONE HUNDRED AND SIXTY-FOUR THOUSAND ONE HUNDRED AND EIGHTY-FIVE *cubic feet.*

"It will give me pleasure to render you any further information in my power in furtherance of your very useful documents.

"Yours, very respectfully,

Daily Adv.] "H. ELY."

LABORING CLASSES IN EUROPE.

The following abstract of an article in the last number of the North American Review, is from the Portsmouth Journal:—

In *Norway* farms are cultivated by a class of laborers called *house men*, who receive from the landlord a house and a quantity of land, and in return work for him at a low, fixed price, whenever he demands it. Bread and gruel is their ordinary food; both made from oatmeal, with occasional addition of a little salt fish. Meat they rarely have.

In *Sweden* the peasantry are educated to some extent, so that most of them are able to read and write. Their dress is pointed out by law. Their food consists of hard bread, dried fish and gruel; no meat. In general their dwellings are like the rude huts reared by the settlers of our western forests.

In *Denmark* the peasantry are held in bondage—bought and sold with the land on which they work. Their food and dwelling like those just mentioned.

In *Russia* the bondage of the peasantry is still more complete than in Denmark. There are but two native classes—the noble and the serf. Those who transact the commercial business of the cities, are principally foreigners not residing permanently in the country. The land is owned by the noblemen; and whenever any of it is sold, the peasantry residing upon it are transferred with it. They have about half their time at their disposal; but are always liable to be called upon to work for their masters. The better class of the peasants live in cottages, with stables or barns attached to them. Few, if any, have beds—but sleep upon bare boards, or upon parts of the immense stoves by which their houses are warmed. Their food consists of black bread, cabbage and other vegetables, without any animal food or butter. During some seasons of the year the women are employed in the field, as they are in other parts of Europe.

In *Poland* the serfs are, if possible, still more degraded than in Russia. The nobles are the proprietors of the land, and the peasants are slaves. If a plebeian strike a noble, his punishment is death. A recent traveler says, "I have traveled in every direction, and never saw a wheaten loaf to the eastward of the Rhine, in any part of Northern Germany, Poland or Denmark." Another writer remarks of Poland, "the peasants live in wooden huts, covered with thatch or shingles, consisting of one room with a stove, around which the inhabitants and their cattle crowd together, and where the most disgusting kinds of filthiness are to be seen. Their common food is cabbage, potatoes, sometimes, but not generally, peas, black bread and soup, or rather gruel, without the addition of butter or meat; and the chief drink is water or the cheap whiskey of the country." These are the working men, not the paupers of the country. They are the only class engaged in honest industry and toil. They cannot rise from their degradation, for the long established customs and the harsh and oppressive laws forbid it.

Germany comprises a number of separate states, in which the condition of the laboring classes varies according to the nature of their respective laws. In some they are comparatively free and well educated; in others the feudal burdens are still resting upon the cultivators of the soil. In general the people of the protestant states of Germany are more free and better educated, than they are where the Catholic religion is the established one. In Austria, the most powerful of the states, the nobles are the proprietors of the land, and the peasants are compelled to work for their masters every day in the week except Sundays. The cultivators of the soil are in a state of bondage. In Hungary their condition is still worse---there being no intermediate link between the noble and the slave. The owners of the soil perform no labor---pay no taxes. The laboring classes are required to repair high ways and bridges—are liable to have soldiers quartered upon them, and are compelled to pay one tenth of the produce of their toil to the church, and one ninth to the lord whose land they occupy.

The following anecdote, which is related by a recent traveler, [Russell] will illustrate the condition of the laboring classes in Hungary.

He spent a few weeks at the residence of one of the most respectable Hungarian noblemen. Taking a walk one afternoon with the count over part of the grounds, they came upon some peasants who were enjoying their own rustic amusements. The count imagined that one of them did not notice him as he passed, with sufficient humility. He immediately sent to his house for some servants, and ordered them to seize, bind and lash the poor man. His orders were instantly executed. The visitor entreated the count, to put an end to such a punishment for such a trivial offence, if it were one at all. The answer was, "What! do you intercede for such a brute? He is no nobleman. That these people may not think any body cares for them, give him twenty lashes more." And they were according administered.

In many of the German states, the means of education are extremely limited. In Austria the press is under a severe censorship, and nothing finds its way to the public eye, excepting what the cabinet may choose to publish. One reply of the emperor, during the session of the congress at Laybach, to the teacher of a public seminary, has often been quoted. "I want no learned men, I need no learned men, I want men who will do as I bid them." It is said that in Hungary, of whole villlages, not an individual can read or write; and that, of the inhabitants of Hungary, Transylvania and Croatia, all of which are within the Austrian dominions, twelve millions are entirely ignorant and uninstructed.

It would be little better than mere repetition, to enlarge upon the state of the idle nobles and beggars of Italy, the priest-ridden people of Spain, or the unemployed and impoverished tradesmen and artizans of Holland or Belgium.

Sheep for Sale.

THE subscriber has for sale at his farm at East Bloomfield Center, 40 Bucks and about 500 Ewes. They are from the finest flocks of Dutchess county, and consist of full blooded Merinos and Saxons, and various grades of each.

LEONARD THOMPSON.

Bloomfield Center, Nov. 19, 1835. nov 21 f3t

Monroe Horticultural Garden & NURSERY.

THE subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, &c. &c.

ALSO—A few hundred of the Morus Multicaulis, or Chinese Mulberry, the White Italian Mulberry by the hunbred or thousand, Grape Vines of both native and foreign varieties, mosty of large size, for sale by the single vine, hundred or thousand, at reduced prices. The subscriber has a large collection of Green-House Plants of choice and select varieties, and in good condition.

☞ Orders for *Mr.* Rowe's Nursery received by the Publisher of this paper.

Catalogues will be sent to those who wish them, gratis, or may be had by calling at the office of the Genesee Farmer. ASA ROWE.

Greece, *M*onroe co. N. Y. Sept. 13, 1834.